In the Claims:

1. (Currently Amended) A method for preoperative planning and simulating of an orthopedic surgical ~~procedures~~ procedure to be performed on an anatomical structure, using medical images of the anatomical structure, comprising inter alia ~~the steps of the following~~: a. obtaining and displaying ~~said~~ the medical images of the anatomical structure ; b. segmenting the anatomical structure into segments in said medical images; and c. using the obtained medical images, planning the result of ~~said~~ the orthopedic surgical procedure to be performed on the anatomical structure, so output images are produced, wherein the obtained output images ~~comprising~~ comprise at least one ~~features~~ feature selected from the group consisting of: a plurality of calibrated organs; a plurality of organ segments; a plurality of calibrated artificial elements; and~~/or~~ at least one superposition of said calibrated artificial elements on said calibrated organs ~~and/~~or organ segments.

2. (Currently Amended) The method according to claim 1, further comprising dynamic rendering of medical device ~~form~~ from pre defined members, the method allowing dynamic rendering of medical devices with a pre defined relationship, wherein two or more members can be integrated to one member in runtime according to a predefined rule.

3. (Original) The method according to claim 1, wherein said medical images are X-ray images.

4. (Currently Amended) The method according to claim 1, wherein said medical images are a combination of plurality of imaging techniques.

5. (Currently Amended) The method according to claim 1, wherein said medical images ~~comprising~~ comprise a plurality of views of said anatomical structure.

6. (Currently Amended) The method according to claim 1, wherein the obtaining step ~~comprising~~ comprises transforming of said medical images to digital images.

7. (Original) The method according to claim 1, wherein said obtaining includes composing of several images of the same anatomical structure into a full-length view of said anatomical structure.

8. (Currently Amended) The method according to claim 1, wherein the obtaining step ~~comprising~~ comprises calibrating of images.

9. (Currently Amended) The method according to claim ~~6~~ 8, wherein said calibrating ~~comprising~~ comprises registration of different views.

10. (Currently Amended) The method according to claim ~~6~~ 8, wherein said calibrating ~~comprising~~ comprises dimension and orientation calibration.

11. (Currently Amended) The method according to claim ~~6~~ 8, wherein said calibrating ~~comprising~~ comprises image enhancements comprising brightness and contrast adjustments, and edge detection.

12. (Currently Amended) The method according to claim 1, wherein the segmenting step is performed in at least one of a group of ways, comprising: manual ~~manually~~ performance by a medical expert, ~~or automatically~~automatic performance, ~~in the manner that~~wherein the anatomical structure segments are segmented according to predefined rules, ~~or~~ and ~~semi-automatically~~semi-automatic performance, ~~in the manner that~~wherein the segmenting step is performed automatically with the assistance of a medical expert.

13. (Currently Amended) The method according to claim 1, wherein the planning step ~~comprising~~ comprises simulating different positioning of said anatomical structure segments.

14. (Currently Amended) The method according to claim ~~14~~ 13, wherein said different positioning of said anatomical structure segments relates to reducing of fractures during trauma treatment.

15. (Currently Amended) The method according to claim ~~14~~ 13, wherein said different positioning of said anatomical structure segments relates to pre designed osteotomy treatments. ~~for deformed anatomical structures.~~

16. (Original) The method according to claim 1, wherein said artificial elements comprising implants, in the manner that superposition of implants and said segmented anatomical structure over non-segmented fragments of said anatomical structure is provided.

17. (Canceled)

18. (Currently Amended) The method according to claim ~~18~~ 17, further comprising a step of choosing a plurality of said fixation elements from a predefined database.

19. (Currently Amended) The method according to claim ~~18~~ 17, further comprising rules for correct positioning of said fixation elements so incorrect positioning of said fixation elements is prevented.

20. (Currently Amended) The method according to claim 1, ~~additionally comprising a step of~~wherein said planning comprises producing and storing the output images and planning reports of a plurality of alternatives of said steps of segmenting and planning, for the purpose that the best alternative for medical treatment is selected from said alternatives; said planning report comprising part definition of said calibrated artificial elements selected for the treatment as well as patient information.

21. (Original) The method according to claim 20, additionally comprising a step of providing hard copies of said output images and said planning reports of a selected set of said alternatives.

22. (Original) The method according to claim 20, additionally comprising a step of communicating said output images and said planning reports to a plurality of remote users.

23. (Currently Amended) An apparatus for pre planning and simulating of an orthopedic surgical procedure~~procedures~~ to be performed on an anatomical structure, using medical images of the anatomical structure, the apparatus comprising; a. segmenting means for defining and marking anatomical structure segments in ~~said~~ the medical images of the anatomical structure; b. planning means for planning the result of said orthopedic surgical procedure to be performed on the anatomical structure, using the medical images of the anatomical structure, the planning means comprising means for producing output images; wherein said output images ~~comprising~~ comprise at least one ~~features~~ feature selected from the group consisting of a plurality of calibrated organs; a plurality of organ segments; a plurality of calibrated artificial elements; and/~~or~~ at least one superposition of said calibrated artificial elements on said calibrated organs and/~~or~~ organ segments; c. a memory for storing said medical images and ~~said~~ a desired result; and, d. a display for displaying said medical images and said output images~~;~~.

24. (Currently Amended) The ~~method~~ apparatus according to claim ~~1~~ 23, further comprising means for dynamic rendering of medical device ~~form~~ from pre defined members, allowing dynamic rendering of medical devices with a pre defined relationship, wherein two or more members can be integrated to one member in runtime according to a predefined rule.

25. (Currently Amended) The apparatus according to claim ~~24~~ 23, wherein the medical images are X-ray images.

26. (Currently Amended) The apparatus according to claim ~~24~~ 23 wherein the medical images are combination of a plurality of imaging techniques.

27. (Currently Amended) The apparatus according to claim ~~24~~ 23, wherein the medical images ~~comprising~~ comprise a plurality of views of the same anatomical structures.

28. (Currently Amended) The apparatus according to claim ~~24~~ 23, additionally comprising means for transforming said medical images to digital images.

29. (Currently Amended) The apparatus according to claim ~~1~~ 23, additionally comprising means for composing of several images of the same anatomical structure into a full-length view of said anatomical structure.

30. (Currently Amended) The apparatus according to claim ~~24~~ 23, additionally comprising calibration means for images.

31. (Currently Amended) The apparatus according to claim ~~29~~ 30, wherein the calibration means are also utilized for registration of different views.

32. (Currently Amended) The apparatus according to claim ~~29~~ 30, wherein the calibration means are also utilized for dimension and orientation calibration.

33. (Currently Amended) The apparatus according to claim ~~29~~ 30, wherein the calibration means are also utilized for image enhancements. ~~comprising brightness and contrast adjustments, and edge detection.~~

34. (Currently Amended) The apparatus according to claim ~~29~~ 30, wherein the calibration means are also utilized for correction of image distortions

35. (Currently Amended) The apparatus according to claim ~~24~~ 23, wherein the segmenting means are manually operated by a medical expert, or wherein the segmenting means are automatically operated according to predefined rules, or wherein the segmenting means are operated semi-automatically in the manner that the segmenting step is performed automatically with the assistance of a medical expert.

36. (Currently Amended) The apparatus according to claim ~~24~~ 23, wherein the planning means are additionally utilized for simulating different positioning of said anatomical structure segments.

37. (Currently Amended) The apparatus according to claim ~~36~~ 23, wherein the planning means are utilized for simulating reduction of fractures during trauma treatment.

38. (Original) The apparatus according to claim 36, wherein said different positioning of said anatomical structure segments relates to pre designed osteotomy treatments for deformed anatomical structures.

39. (Currently Amended) The apparatus according to claim ~~24~~ 23, wherein the artificial elements comprise implants, in the manner that superposition of implants and said segmented anatomical structure over non-segmented fragments of said anatomical structure is provided.

40. (Canceled)

41. (Original) The apparatus according to claim 40, further comprising a predefined database comprising predefined sets of fixation elements.

42. (Original) The apparatus according to claim 40, further comprising means for correct positioning of said fixation elements so incorrect positioning of said fixation elements is prevented.

43. (Currently Amended) The apparatus according to claim ~~24~~ 23, additionally comprising a means for producing and storing ~~output images and~~ planning reports of plurality of alternatives, for the purpose that the best alternative for medical treatment is selected from said alternatives, said planning reports comprising part definition of said calibrated artificial elements selected for the medical treatment and patient information.

44. (Original) The apparatus according to claim 43, additionally comprising means for creating hard copies of said output images and said planning reports of a selected set of said alternatives.

45. (Original) The apparatus according to claim 43, additionally comprising communicating means for communicating said output images and said planning reports to remote users.